

*A4 Unit 1*

buffer control value. Figures 12B-C are the kinetic analyses of PKC with respect to substrate MBP (Figure 12B) and ATP (Figure 12C) in the presence or absence of BVR peptide fragments (50  $\mu$ M). PKCI corresponds to SEQ. ID. No. 29, BVR1 peptide corresponds to SEQ. ID. No. 34, and BVR2 peptide corresponds to SEQ. ID. No. 19.

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In the Claims:

Please cancel claims 10-67 without prejudice and please amend claims 1 and 4 as follows:

*A5*

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1. (Amended) A method of regulating protein kinase activity comprising:  
contacting a protein kinase with biliverdin reductase, or an active  
fragment or variant thereof, under conditions effective to regulate protein kinase activity.

4. (Amended) The method according to claim 1, wherein the biliverdin  
reductase is rat or human biliverdin reductase.

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Please add new claims 68-76 as follows:

*A4*

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*bil*

68. (New) A method of regulating protein kinase C activity comprising:  
contacting protein kinase C with biliverdin reductase, or an active  
fragment or variant thereof, under conditions effective to regulate protein kinase C activity.

69. (New) The method according to claim 68, wherein the protein kinase  
C is a human protein kinase C.

70. (New) The method according to claim 69, wherein the human protein  
kinase C is selected from the group of protein kinase C isozymes  $\alpha$ ,  $\beta$ , and  $\gamma$ .

71. (New) The method according to claim 68, wherein said contacting is  
carried out with rat or human biliverdin reductase.

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*Alb Cont'd*

72. (New) The method according to claim 71, wherein the biliverdin reductase is human biliverdin reductase comprising an amino acid sequence according to SEQ. ID. No. 1 or SEQ. ID. No. 3.

*but c1*

73. (New) The method according to claim 68, wherein said contacting is carried out with a fragment of rat biliverdin reductase comprising an amino acid sequence according to SEQ. ID. No. 18 or SEQ. ID. No. 19 or a fragment of human biliverdin reductase comprising an amino acid sequence according to SEQ. ID. No. 34 or SEQ. ID. No. 35.

74. (New) The method according to claim 1, wherein said contacting is carried out in the cell.

75. (New) The method according to claim 74, wherein the cell is *in vivo*.

76. (New) The method according to claim 74, wherein the cell is *in vitro*.

*Add c1*